

# *Model: 25 & 25D*

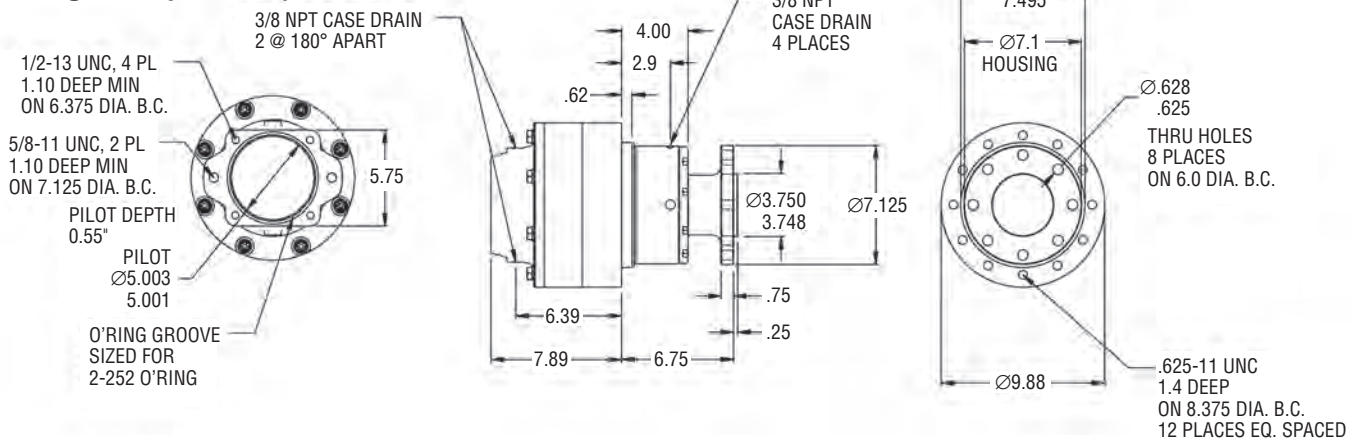


**HÉCO GEAR**  
Planetary Speed Reducers for Industry

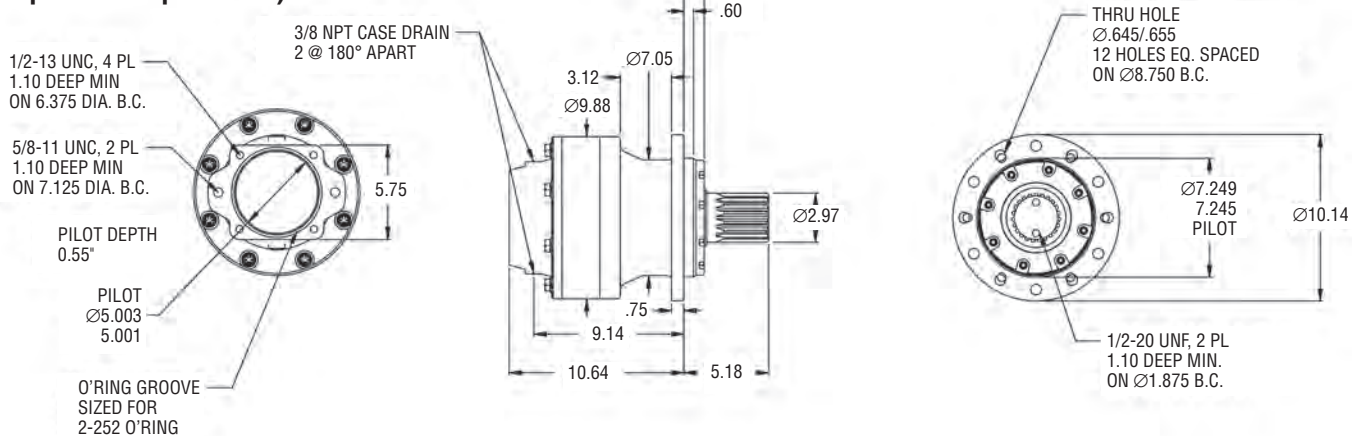
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# Model 25 Installation Dimensions

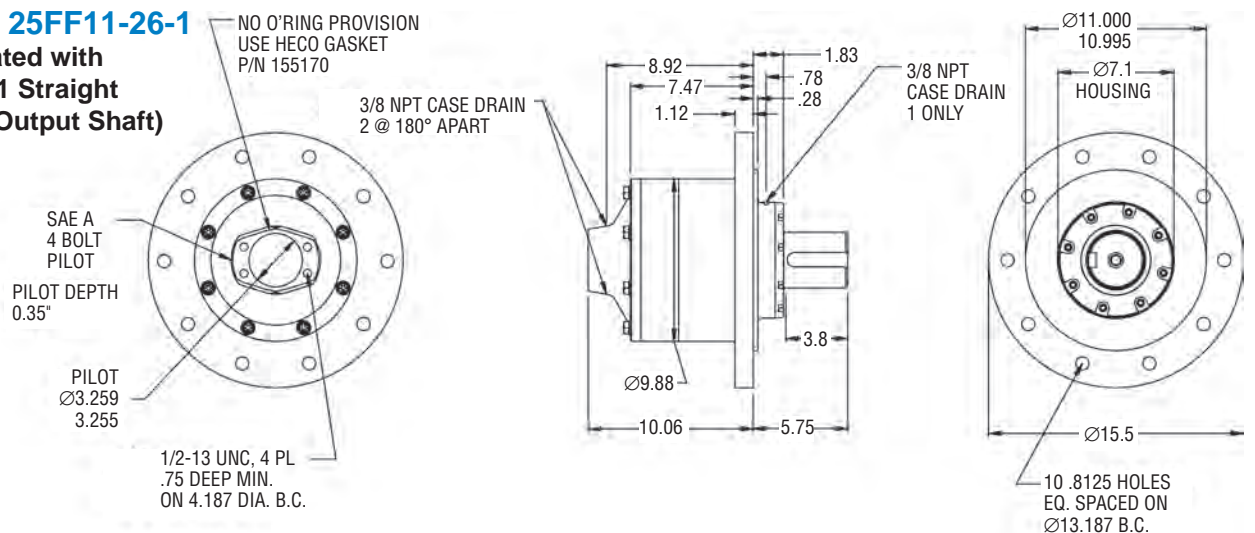
## Model 25CF2-66-1 (Illustrated with Code 2 Flanged Output Shaft)



## Model 25AF4-66-1 (Illustrated with Code 4 Splined Output Shaft)



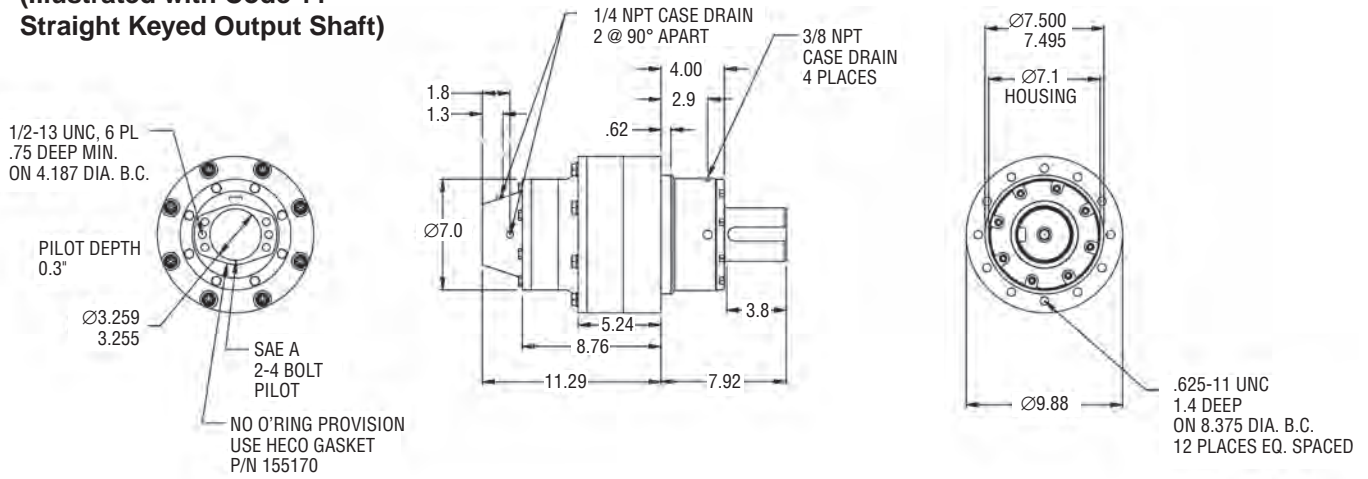
## Model 25FF11-26-1 (Illustrated with Code 11 Straight Keyed Output Shaft)



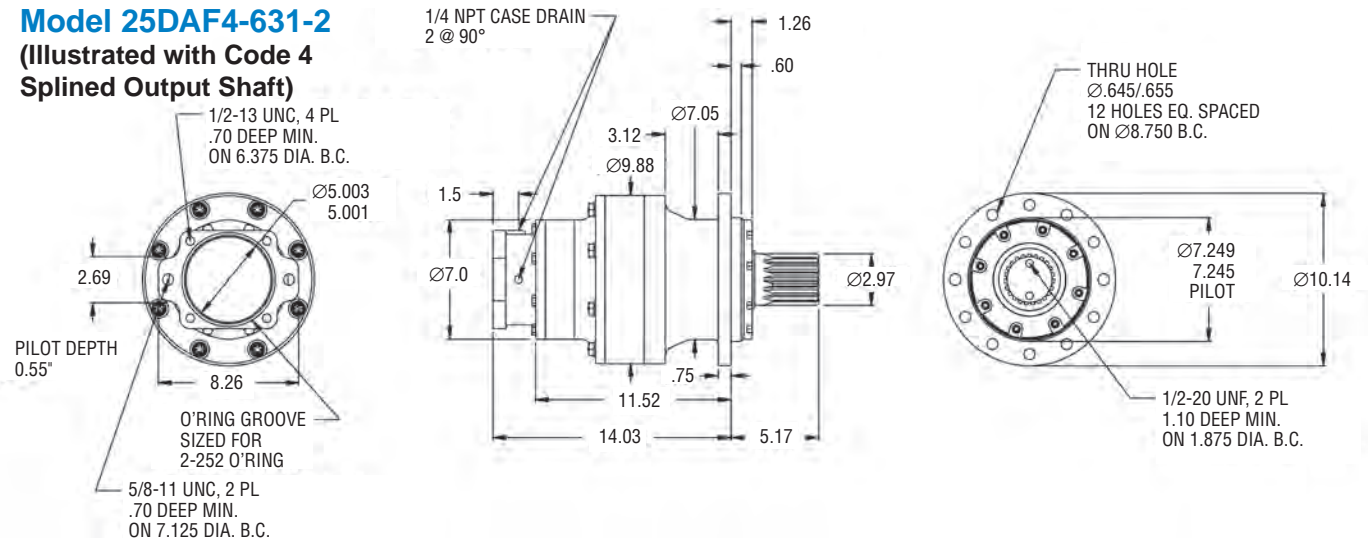
NOTE: Installation drawings are available at [www.hecogear.com](http://www.hecogear.com) under "Products".

# Model 25D Installation Dimensions

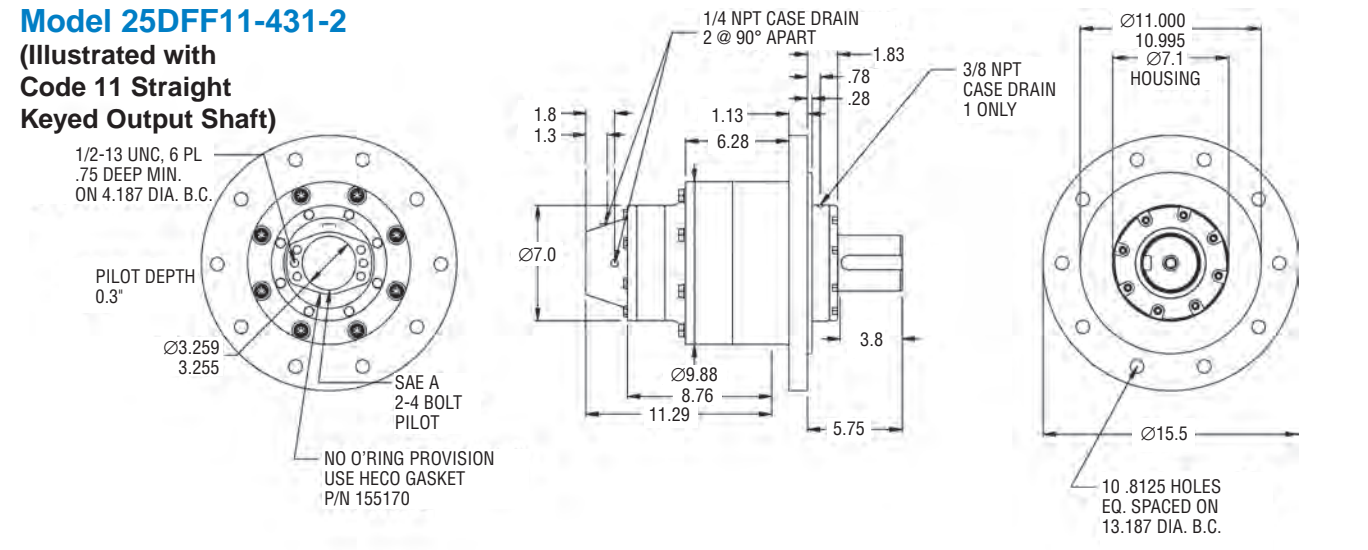
## Model 25DCF11-431-2 (Illustrated with Code 11 Straight Keyed Output Shaft)



## Model 25DAF4-631-2 (Illustrated with Code 4 Splined Output Shaft)

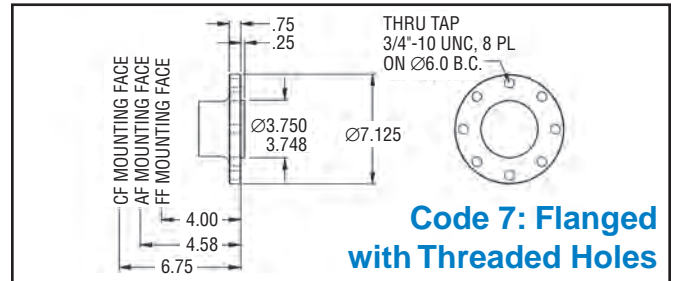
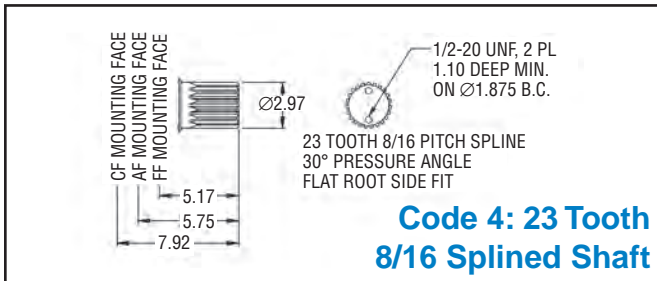
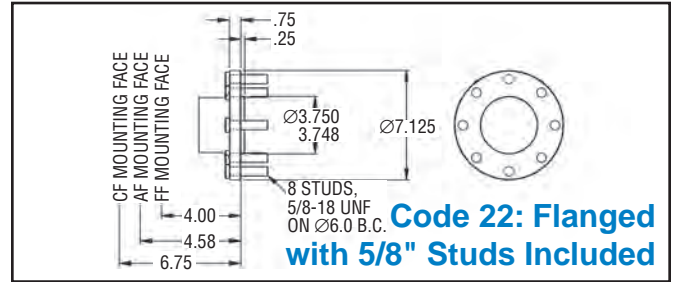
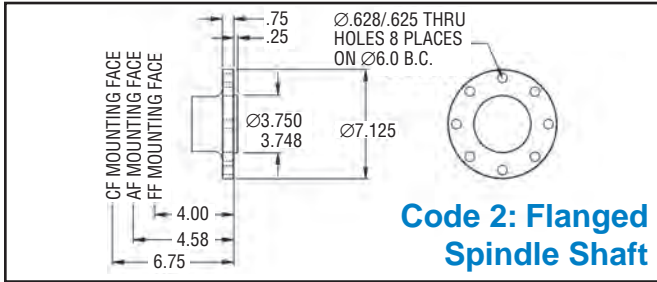
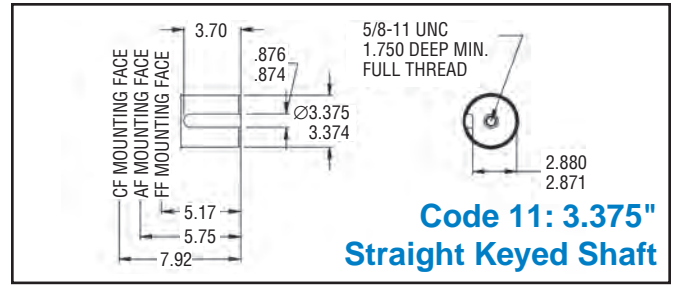
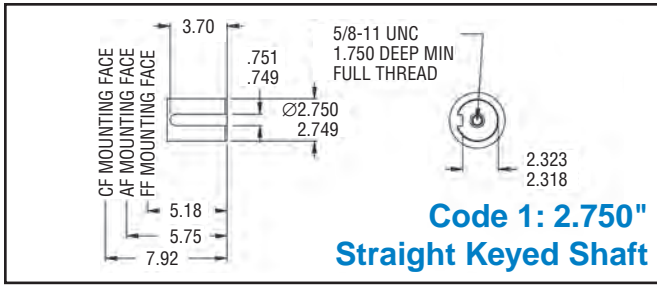


## Model 25DFF11-431-2 (Illustrated with Code 11 Straight Keyed Output Shaft)

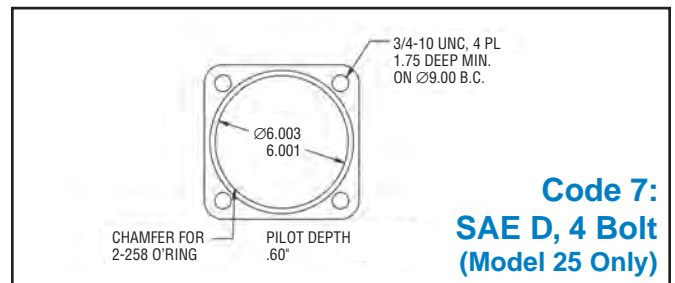
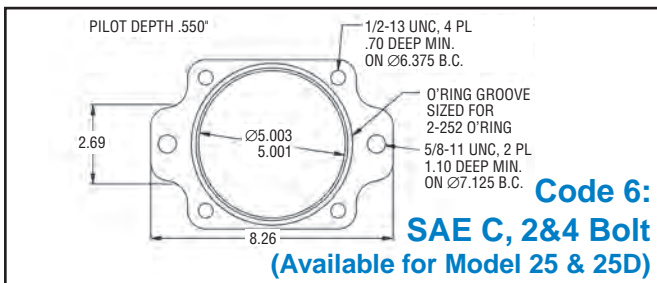
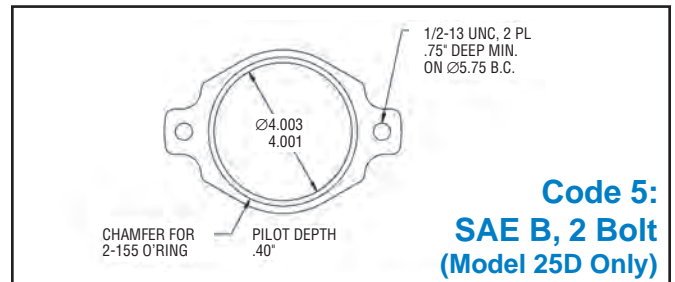
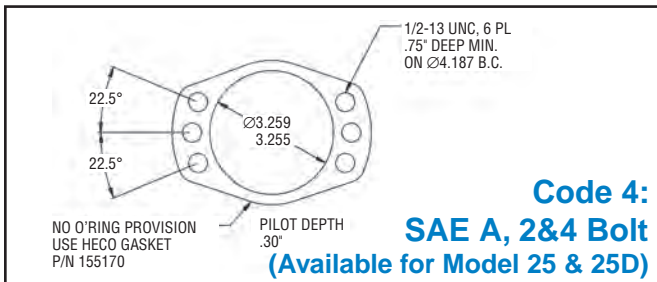
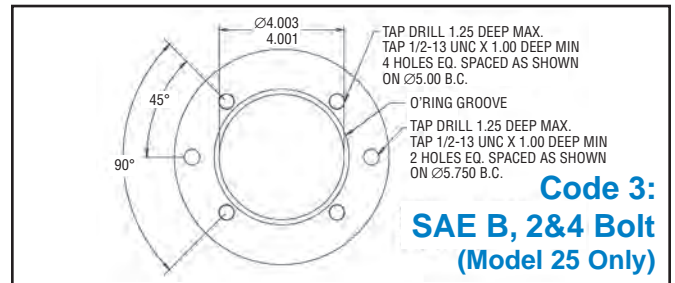
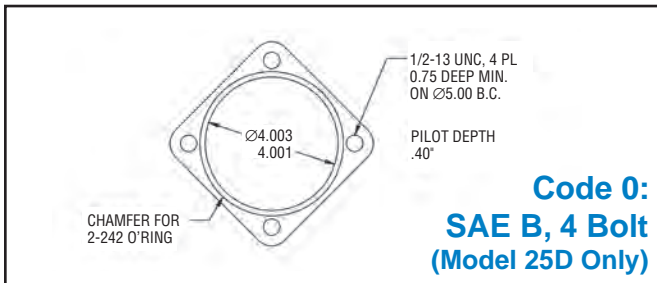


NOTE: Installation drawings are available at [www.hecogear.com](http://www.hecogear.com) under "Products".

# Output Shaft Options



# Motor Adapter Options



# Performance Data

## Torque <sup>(1)(2)</sup>

Continuous	Intermittent	Peak
85,000 in-lbs	110,000 in-lbs	135,000 in-lbs
7,080 ft-lb	9,150 ft-lb	11,250 ft-lb
9,600 Nm	12,400 Nm	15,250 Nm

## Ratios

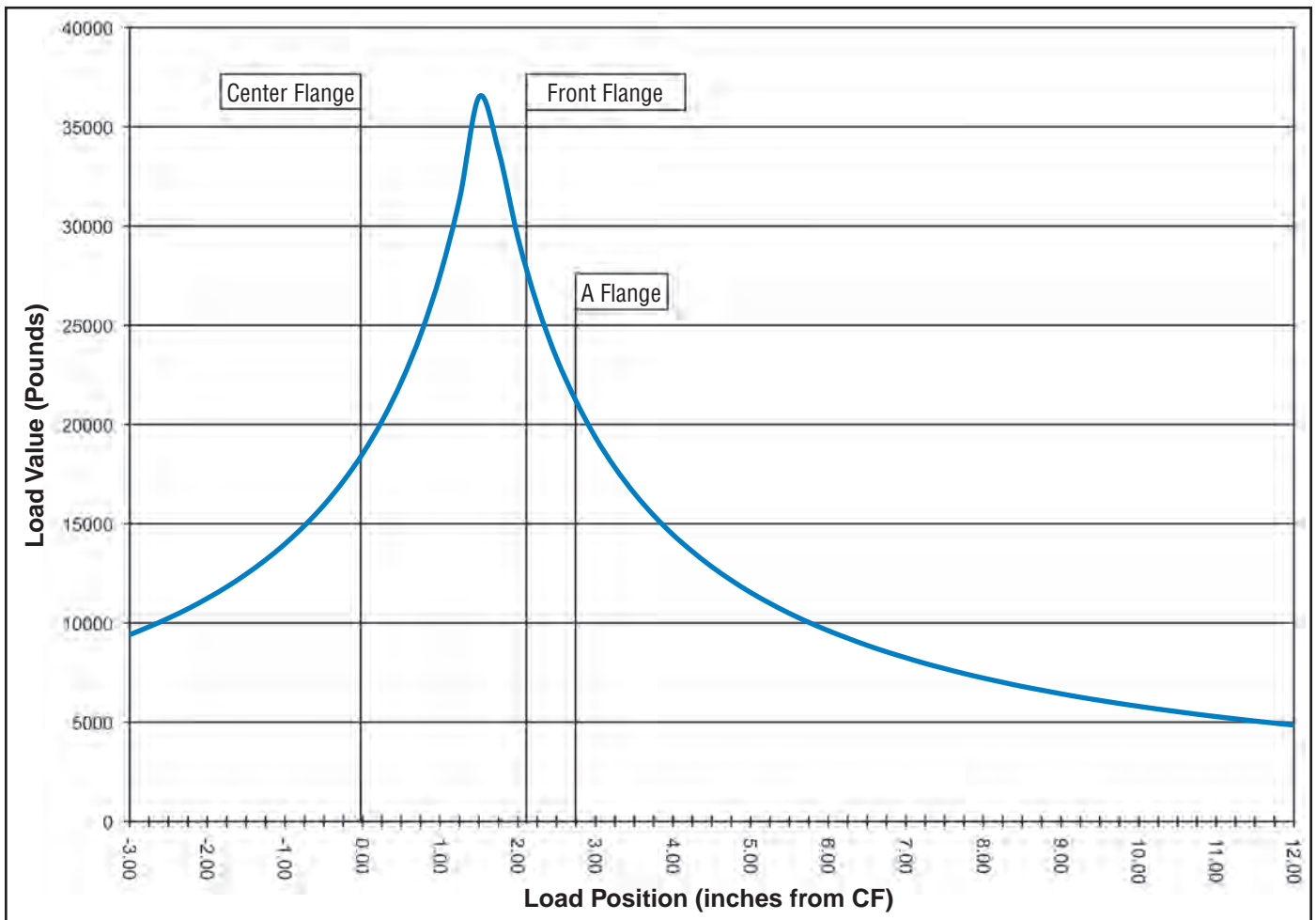
Model 25	Model 25D
4.8:1 & 6.0:1	24.96:1 & 31.2:1

## Speed <sup>(1)(2)</sup>

Model 25 Max. Intermittent		Model 25D Max. Intermittent	
Input	Output	Input	Output
1500 rpm	300 rpm	2300 rpm	90 rpm

## Radial Load Rating <sup>(1)(2)</sup>

**Model 25 Output Bearing Life Curve**  
3000 Hours at 100 RPM (L10 Life)  
18,000,000 Revolutions



<sup>(1)</sup> Ratings are based on using 85W-140 gear oil.

<sup>(2)</sup> For applications outside of these parameters contact Heco Gear.

## Application Information

Torque, speed, radial and axial load affect reducer life. Reducer life is also dependent on the duty cycle of the specific application. A duty cycle is defined by Heco as an operation beginning with start and ending with a full stop or full reversal. Duty cycle segments often consist of a number of components; starting, running and stopping are the typical components. Swing or slewing drives often consist of reversals with overrunning load components that affect speed reducer life. Starting and stopping under load will also affect reducer life.

Applications requiring simultaneous high speed and high torque operation will have reduced life. Applications requiring high speed and low torque operation may have a reduced life. Applications requiring high speed and low torque duty cycles or low speed and high torque duty cycles may have extended reducer life depending upon application specifics.

Consult Heco Gear with your duty cycle information and our design engineers can estimate speed reducer life for your specific application, however, testing the speed reducer in the specific application by the customer is recommended to determine actual life.

## Oil Recommendation

For maximum speed reducer life, the recommended oil is SAE 85W-140 multi-grade gear oil meeting API-GL5 and API-MT1 service. Alternate oil that will provide adequate speed reducer life is SAE 90W gear oil meeting API-GL5 and API-MT1 service. These oils should be readily available at your local automotive store or lubricant dealer.

When using a bearingless hydraulic motor or "Flow Through" lubrication, where hydraulic oil from the hydraulic motor lubricates the speed reducer, an ISO 68 hydraulic oil with EP1 additives and a minimum of 0.125% zinc anti-wear additive will provide adequate speed reducer life.

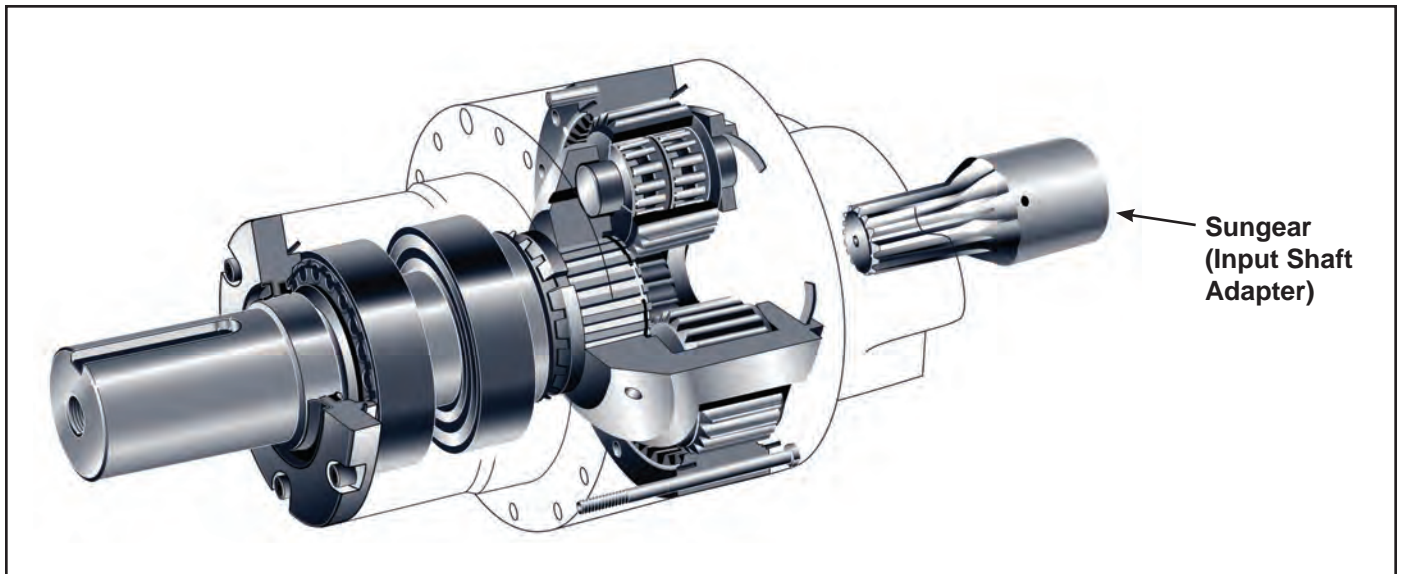
Maximum oil temperature should not exceed 160° F (71° C) for continuous operation or 180° F (82° C) for intermittent operation.

Consult Heco Gear for applications requiring use of non-petroleum based or fire retardant lubrication.

### Approximate Weight

Mounting Flange	Model 25	Model 25D
CF	145 lbs	165 lbs
AF	150 lbs	170 lbs
FF	205 lbs	230 lbs

# Sungear (Input Shaft) Options



## Model 25

Sungears		Motor Shaft Lengths (From motor mounting flange to the end of the shaft.)	
Sungear #	Hydraulic Motor Shaft Type	Min. Length - in (mm)	Max. Length - in (mm)
20F4	4.8:1 Ratio Charlynn 4000 Bearingless	N/A	N/A
20F6	6.0:1 Ratio Charlynn 4000 Bearingless	N/A	N/A
20G4	4.8:1 Ratio Charlynn 6000 Bearingless	N/A	N/A
20G6	6.0:1 Ratio Charlynn 6000 Bearingless	N/A	N/A
20I4	4.8:1 Ratio 1 1/4" - 14 Tooth Spline	1.97 (50.04)	2.32 (58.93)
20I6	6.0:1 Ratio 1 1/4" - 14 Tooth Spline	1.97 (50.04)	2.32 (58.93)
25K*	6.0:1 Ratio 1 3/4" - 13 Tooth 8/16 Spline	1.97 (50.04)	2.32 (58.93)
25L*	4.8:1 Ratio 17 Tooth 12/24 Spline	1.97 (50.04)	2.32 (58.93)
25L*	6.0:1 Ratio 17 Tooth 12/24 Spline	1.97 (50.04)	2.32 (58.93)

## Model 25D

Sungears		Motor Shaft Lengths (From motor mounting flange to the end of the shaft.)	
Sungear #	Hydraulic Motor Shaft Type	Min. Length - in (mm)	Max. Length - in (mm)
16B*	7/8" - 13 Tooth Spline	1.40 (35.56)	1.75 (44.45)
16C*	1" - 15 Tooth Spline	1.70 (43.18)	1.95 (49.53)
16D*	1" Straight Keyed	1.80 (45.72)	2.10 (53.34)
16E	Charlynn 2000 Bearingless	N/A	N/A
16F	Charlynn 4000 Bearingless	N/A	N/A
16H*	1 1/4" Straight Keyed <sup>(1)</sup>	2.05 (52.07)	2.40 (60.96)
16I*	1 1/4" - 14 Tooth Spline <sup>(1)</sup>	2.00 (50.80)	2.32 (58.93)
16M*	1" SAE 6B Spline	1.95 (49.53)	2.30 (58.42)

\* Hydraulic motor shaft may not be standard length. Components are available to accommodate longer motor shafts.

<sup>(1)</sup> Charlynn 4000 Series standard motors require a spacer kit - see price list.

# Order Information & Model Codes

## Model 25 – Speed Reducer Model Code

Code	Description	Code	Description
<b>1 - Mounting Flange Base Model</b>		<b>3 - Motor Adapters</b>	
25FF	Front Flange	3	SAE B - 2&4 Bolt Combination
25AF	"A" Flange	4	SAE A - 2&4 Bolt Combination
25CF	Center Flange	6	SAE C - 2&4 Bolt Combination
<b>2 - Output Shaft Options</b>		7	SAE D - 4 Bolt
1	2.750" Straight Keyed	<b>4 - Ratios</b>	
11	3.375" Straight Keyed	4	4.8:1
2	Flanged Shaft	6	6.0:1
22	Flanged Shaft with 5/8" Studs	<b>5 - Design Number</b>	
4	23 Tooth 8/16 Spline	1	Current Design
7	Flanged Shaft with Threaded Holes	<b>6 - Special Options</b>	
		Axx	Will Be Noted By "Axx"
		A22	Nickel Plated Shaft & Seal Carrier

### Sample Model 25 Code

1	2	3	4	5	6
25CF	11	6	6	1	A22

## Model 25 – Sungear Kit Model Code

20F4	4.8:1 Ratio Charlynn 4000 Bearingless	20I6	6.0:1 Ratio 1 1/4" - 14 Tooth Spline
20F6	6.0:1 Ratio Charlynn 4000 Bearingless	25K*	6.0:1 Ratio 1 3/4" - 13 Tooth 8/16 Spline
20G4	4.8:1 Ratio Charlynn 6000 Bearingless	25L*	4.8:1 Ratio 17 Tooth 12/24 Spline
20G6	6.0:1 Ratio Charlynn 6000 Bearingless	25L*	6.0:1 Ratio 17 Tooth 12/24 Spline
20I4	4.8:1 Ratio 1 1/4" - 14 Tooth Spline		

Note: Mounting bolts and O-rings or gaskets are included.

## Model 25D – Speed Reducer Model Code

Code	Description	Code	Description
<b>1 - Mounting Flange Base Model</b>		<b>3 - Motor Adapters</b>	
25DFF	Front Flange	0	SAE B - 4 Bolt
25DAF	"A" Flange	4	SAE A - 2&4 Bolt Combination
25DCF	Center Flange	5	SAE B - 2 Bolt
<b>2 - Output Shaft Options</b>		6	SAE C - 2&4 Bolt Combination
1	2.750" Straight Keyed	<b>4 - Ratios</b>	
11	3.375" Straight Keyed	25	24.96:1
2	Flanged Shaft	31	31.2:1
22	Flanged Shaft with 5/8" Studs	<b>5 - Design Number</b>	
4	23 Tooth 8/16 Spline	2	Current Design
7	Flanged Shaft with Threaded Holes	<b>6 - Special Options</b>	
		Axx	Will Be Noted By "Axx"
		A22	Nickel Plated Shaft & Seal Carrier

### Sample Model 25D Code

1	2	3	4	5	6
25DCF	1	0	31	2	A22

## Model 25D – Sungear Kit Model Code

16B*	7/8" - 13 Tooth Spline	16F	Charlynn 4000 Bearingless
16C*	1" - 15 Tooth Spline	16H*	1 1/4" Straight Keyed <sup>(1)</sup>
16D*	1" Straight Keyed	16I*	1 1/4" - 14 Tooth Spline <sup>(1)</sup>
16E	Charlynn 2000 Bearingless	16M*	1" SAE 6B Spline

Note: Mounting bolts and O-rings or gaskets are included.

\* Hydraulic motor shaft may not be standard length. Components are available to accommodate longer motor shafts.

<sup>(1)</sup> Charlynn 4000 Series standard motors require a spacer kit - see price list.